NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

Animal Use Area Protection
(No.)
No. 237-i

Definition

Protecting areas used for animal feeding, loafing, or confinement by surfacing with suitable materials, or by installing needed structures.

Purpose

To protect water quality and stabilize feedlots, feeding areas, loafing areas, or facility areas frequently and intensely used by animals.

Conditions Where Practice Applies

On frequently and intensely used areas that require special treatment to protect them from erosion, and minimize contamination of surface and subsurface waters.

Federal, State, and Local Laws

Design and construction activities shall comply with all federal, state, and local laws, rules, and regulations governing pollution abatement, health, and safety. The owner or operator shall be responsible for securing all required permits or approvals and for performing in accordance with such laws and regulations. NRCS employees are not to assume responsibility for procuring these permits, rights, or approvals, or for enforcing laws and regulations. NRCS may provide the landowner or operator with technical information needed to obtain the required rights or approvals to construct, operate, and maintain the practice.

Permits may be required from the following agencies:

1. ***West Virginia Department of Health***
2. ***West Virginia Department of Agriculture***

Planning Considerations

Consideration will be given to the location, distance, and gradient to streams, sinkholes, and well heads; depth to bedrock; aquifer flow characteristics; animal traffic patterns; animal density; type of maintenance equipment; proximity to neighbors; prevailing winds; visual effects; and operation and maintenance costs.

Water Quantity

1. Effects on the water budget, especially on volumes and rates of runoff, infiltration, and transpiration.

* ***Runoff from impervious surfaces increase runoff of nutrients, solids, and bacteria when compared to earthen areas.***

* ***Surface area should be minimized to reduce the amount and treatment cost of runoff.***

Water Quality

1. Effects on erosion and the movement of sediment, animal waste, and soluble and sediment-attached substances carried by runoff.

2. Effects of changes in surface and ground water caused by introduction of fertilizer for vegetated areas, and oils and chemicals associated with concrete and asphalt placement and other construction activities.

3. Effects of changes in surface water caused by the surfacing of confined animal feeding and loafing areas.

Design Criteria

This practice shall be planned, designed, and installed as a part of a Waste Management System (312).

Surface Area. ***Where cattle are confined and have access to a protected loafing area (i.e. barn or shelter), 50 to 75 sq. ft. per animal is recommended.***

Where cattle are confined and do not have access to a protected loafing area, 125 to 175 sq. ft. per animal is recommended.

Where the area is being used as a feeding pad only, 50 to 75 sq. ft. per animal is recommended.

Animal use areas for livestock other than cattle will be sized according to the Midwest Plan Service guidelines, or equivalent animal units.

Fencing. ***Fencing may be needed to confine livestock, control access to the stabilized pad, or separate animals from filter areas, where vegetation requires protection.***

Field Investigation. ***A full investigation of the topography of the site, soil conditions, and degree and type of usage shall be made before a specific plan is prepared for the area.***

Drainage and Erosion Control.
Provision shall be made for surface and subsurface drainage, as needed, and for disposal of runoff without causing erosion.

Runoff Treatment. ***Surface runoff will be controlled in accordance with applicable standards (diversion, roof runoff management, etc.) to minimize overland flow onto, and through, the heavy use area. Runoff from the stabilized area will not discharge directly into drainage ways, streams, or other bodies of water and will be treated according to the Waste Management System standard (312). Filter areas shall be designed according to Filter Strip (393) and shall be protected from solids deposition by curbing, catch basins, or other appropriate installations.***

Base Course. ***All areas to be paved shall have a 6-inch base course of gravel, crushed stone, or other suitable materials. The base course for concrete may be as shown in practice standard 313 for concrete floors.***

Surface Treatment. ***Concrete or asphalt is strongly recommended for concentrated confinement areas. Other surface materials may be used for stabilized feeding pads.***

Asphalt. ***The thickness of an asphalt course, the kind and size of aggregate, the type of proportioning of bituminous materials, and the mixing and placing of these materials shall be in accordance with standard highway practice for the expected loading.***

Concrete. ***The quality and thickness of concrete and the spacing and size of reinforcing steel shall be appropriate for the expected loading and in accordance with the requirements in the standard for Waste Storage Facility (313).***

Gravel. ***The minimum thickness for a gravel surface shall be 3 inches on top of the required 6-inch base course.***

Other. ***If other surfacing materials are used, such as cinders, tanbark, and sawdust, the minimum thickness shall be 6 inches.***

Structures. ***All structures shall be designed in accordance with appropriate NRCS standards or National Engineering Handbook recommendations.***

Vegetative Measures. ***Liming, fertilizer, seeding, and mulching shall be appropriate for disturbed areas and in accordance with the applicable NRCS standards. If vegetation is not appropriate, other measures shall be used to prevent erosion.***

Plans and Specifications

Plans and specifications for Animal Use Area Protection shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

Operation and Maintenance

An operation and maintenance plan shall be developed for these installations. The

operation and maintenance plan shall be provided to, and discussed with, the operator. The O&M plan must complement the waste utilization plan.

Items that should be part of the plan are:

1. Periodic inspections, at least annual.

2. Maintenance of the area by weed control or surface sealing.

3. Repair of deteriorating areas.

4. Repair of surface areas by replacement of lost gravel, repaving holes, regrading paving material.

5. Maintenance of vegetation, where required, by fertilization, liming, or reseeding.

NATURAL RESOURCES CONSERVATION SERVICE
Conservation Practice General Specifications

Animal Use Area Protection
(No.)
No. 237-i

Any clearing and grubbing necessary to install animal use area protection shall be done in accordance with the plans and specifications. All materials shall be disposed of by burying, burning, or removal from the site.

All required smoothing, grading, or leveling shall be completed prior to the start of the surfacing operations. The subgrade shall be compacted by 3 passes of the construction equipment to attain a firm foundation for the surfacing materials.

The area shall be constructed to the line, grade, and section shown on the plans.

All materials shall be inspected by NRCS personnel.

Paving and surfacing shall conform to the construction specification for Access Road (560), or Recreation Trail and Walkway (568). Hot mix bituminous surfacing materials shall not be placed on wet subgrade. All surfacing materials shall be placed and finished to the lines and grades shown on the plans.

Construction operations shall be carried out in a manner such that erosion, air, and water pollution will be minimized and held within legal limits.

The job shall be completed in a workmanlike manner and present a finished appearance when completed.